

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claim 11 so as to address the objection to the drawings set forth in paragraph 2 of the Office Action. Specifically, the Applicants have removed the limitation that the second CPU must be “contained”. It is noted that the specification, as originally filed, clearly provides support a device having multiple “contained” CPUs. Further, claims 3, 5 and 7 were amended to address the rejections under 35 U.S.C. § 112, second paragraph. In addition, new claims 12 and 13 were added to recite an additional aspect of the present invention not previously cited. Support for new claims 12 and 13 can be found, for example, on page 27, lines 7-11. No new matter has been added.

Applicants and Applicants attorney wish to thank Examiner Vu for the interview conducted on February 28, 2006 during which time the pending rejection based on Furuhashi was discussed. As discussed during the interview and reiterated herein, Applicants respectfully submit that the pending independent claims are patentable over the cited prior art based in-part on the recitation of the “only when” condition set forth in the independent claims. For the reasons set forth below, Applicants respectfully submit the pending claims are in condition for allowance.

II. The Rejection Of The Claims Under 35 U.S.C. § 112

Claims 3, 5 and 7 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In response to this rejection, Applicants have amended each of the foregoing claims to

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address the issues noted in the Office Action. Applicants respectfully submit that, as amended, claims 3, 5 and 7 fully comply with all requirements of 35 U.S.C. § 112.

III. The Rejection Of The Claims 1 And 11 Under 35 U.S.C. § 102

Claims 1 and 11 were rejected under 35 U.S.C. § 102 as being anticipated by USP No. 6,180,864 to Furuhashi. Applicants respectfully submit that neither claim 1 nor claim 11 are anticipated by Furuhashi for at least the following reasons.

As recited by each of the pending independent claims, the device includes *a bus adjusting circuit* disposed between a first bus and a second bus to exclusively control accesses of an external CPU and a contained CPU to a device connected to the first bus, and connect the second bus to the first bus only when the external CPU is permitted to access the device connected to the first bus. Thus, as recited by each independent claim, the CPU contained LSI device can ONLY connect the second bus to the first bus WHEN the external CPU is permitted to access the device. Referring for example to Fig. 1, in accordance with the foregoing limitation, bus 212 is ONLY coupled to bus 112 WHEN the external processor 200 is permitted access to a device (e.g., common memory 104) coupled to bus 112. In no other instance is bus 212 coupled to bus 112 during the operation of the LSI device.

Turning to Furuhashi, it is asserted in the Office Action that CPU 3 corresponds to the contained CPU; that host CPU 57 corresponds to the external CPU; that main bus 12 corresponds to the first bus; that host bus 55 corresponds to the second bus and the bus arbiter 2 corresponds

to the bus adjusting circuit. Given the foregoing, in order to satisfy the foregoing limitation of the claim, host bus 55 can only be coupled to the main bus 12 when the host CPU 57 is allowed to access a device coupled to the main bus. It is clear that Furuhashi does not satisfy this limitation. When CPU 3 accesses, for example, DRAM 5, CPU 3 is coupled to bus 12 (via bus 11). However, at the same time, Host bus 55 is also coupled to bus 12 via direct bus 33 and bus 11. Indeed, it is noted that the Host bus 55 is always coupled to the CPU bus 11 via direct bus 33. Thus, whenever the CPU is coupled to the main bus 12, Host bus 55 is also coupled to the main bus regardless of whether or not the Host CPU 57 is permitted to access a device coupled to the main bus 12. As a result, Furuhashi does not satisfy the recited limitation that in the CPU contained LSI device, the second bus can ONLY be connected to the first bus WHEN the external CPU is permitted to access the device.

Furthermore, even if the pending rejection is revised to assert that one of the DSPs 8-1 through 8-4 correspond to the contained CPU and the Host CPU corresponds to the external CPU, Furuhashi still fails to satisfy the recited claim limitation. First, the relevant LSI of Furuhashi is the media processor 60, as this is the LSI chip. As such, the determination to be made is whether the media processor and Host CPU 57 satisfy the recited limitation. It is clear that it does not. Importantly, regardless of what element is considered the contained CPU, the Host bus 55 is coupled to the main bus 12 when the CPU 3 accesses the main bus. Thus, even if a DSP is considered the contained CPU, there remains times during the operation of the device of Furuhashi where the Host bus 55 will be connected to the main bus even though the Host CPU

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57 has not been permitted access to the main bus 12. It is therefore clear that Furuhashi fails to satisfy the limitation that the second bus can ONLY be connected to the first bus WHEN the external CPU is permitted to access the device.

As each and every limitation must be disclosed by the cited prior art in order to establish a rejection under 35 U.S.C. § 102, and Furuhashi, at a minimum, fails to disclose the foregoing limitation, it is respectfully submitted that both claims 1 and 11 are patentable over Furuhashi. Indeed, as is well known, “[f]or a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be shown in a single reference”. *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990). Clearly, Furuhashi does not do so.

IV. All Dependent Claims Are Allowable Because The Independent Claims From Which They Depend Are Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as each of the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

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V. Conclusion

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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